YASKAWA

YASKAWA AC Drive-J1000 Option

RS-232C Interface
Technical Manual

Type SI-232/J, SI-232/JC

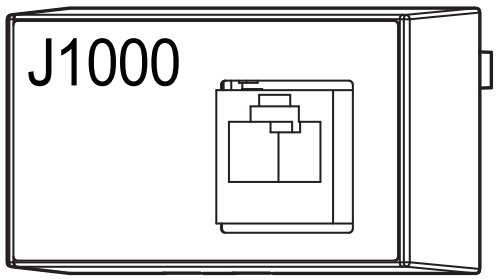
To properly use the product, read this manual thoroughly and retain for easy reference, inspection, and maintenance. Ensure the end user receives this manual.

J1000オプションユニット

RS-232Cインタフェース オプションユニット
取扱説明書

形式　SI-232/J, SI-232/JC

製品を安全にお使い頂くために，この取扱説明書を必ずお読みください。
また，本書をお手元に保管していただくとともに，最終的に本製品をご使用になるユーザー様のお手元に確実に届けられるよう，お取り計らい願います。



MANUAL NO. TOBP C730600 32A

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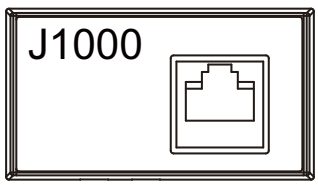
1 Preface and Safety

◆ Applicable Documentation

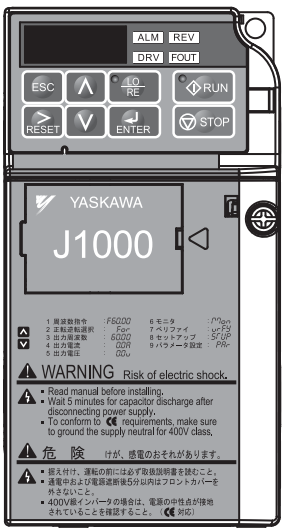
The following manuals are available for the RS-232C Interface Option:

Option Unit

	**Yaskawa AC Drive -RS-232C Interface Option Technical Manual** Read this manual first. The Technical Manual is packaged with the RS-232C Interface Option and contains a basic overview of wiring, settings, functions, and fault diagnoses.

1 Preface and Safety

Yaskawa Drive

<table>
<tr>
<td rowspan="2"> 
</td>
<td>U.S. and Europe:
Yaskawa AC Drive J1000 Quick Start Guide
Other areas:
Yaskawa AC Drive J1000 Installation & Start-Up Manual</td>
<td rowspan="2">To obtain instruction manuals for Yaskawa products access these sites:
U.S.: http://www.yaskawa.com
Europe: http://www.yaskawa.eu.com
Japan: http://www.e-mechatronics.com
Other areas: contact a Yaskawa representative. For questions, contact the local Yaskawa sales office or the nearest Yaskawa representative.</td>
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<td>Yaskawa AC Drive-J1000
Technical Manual</td>
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◆ Terms

Note: Indicates a supplement or precaution that does not cause drive damage.

Drive: Yaskawa AC Drive -J1000 Series

Option: Yaskawa AC Drive -J1000 RS-232C Interface Option

◆ Registered Trademarks

- Other company names and product names listed in this manual are registered trademarks of those companies.

◆ Supplemental Safety Information

Read and understand this manual before installing, operating, or servicing this option unit. The option unit must be installed according to this manual and local codes.

The following conventions are used to indicate safety messages in this manual. Failure to heed these messages could result in serious or possibly even fatal injury or damage to the products or to related equipment and systems.

⚠ DANGER

Indicates a hazardous situation, which, if not avoided, will result in death or serious injury.

⚠ WARNING

Indicates a hazardous situation, which, if not avoided, could result in death or serious injury.

1 Preface and Safety

⚠ CAUTION

Indicates a hazardous situation, which, if not avoided, could result in minor or moderate injury.

NOTICE

Indicates an equipment damage message.

2 Receiving

◆ Receiving

Confirm the packaging after receiving the RS-232C Interface Option. If the wrong model is received or the RS-232C Interface Option does not function properly, contact your supplier.

Components packaged with the option:

- The RS-232C Interface for copy unit/PC communication (SI-232/J or SI-232/JC)
- Technical manual

◆ Additional Parts (Sold Separately)

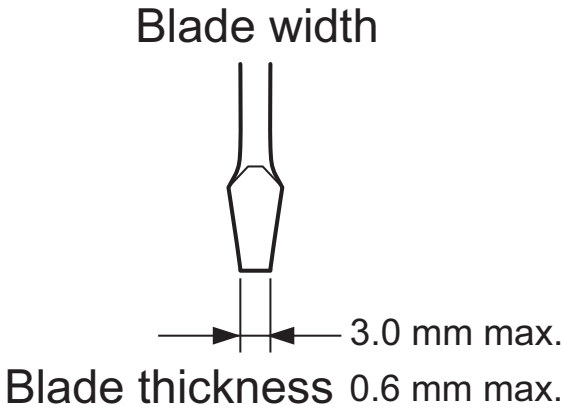
Option	Part Number	Comments
Drive Wizard Plus	-	Available for download from e-mechatronics. www.e-mechatronics.com for or at www.yaskawa.com in the U.S.
PC Interface Cable	WV103	D-sub 9 pin - RJ-45
USB Copy Unit	JVOP-181	Provided with an RJ-45 cable and a USB cable

2 Receiving

Option	Part Number	Comments
LED Operator	JVOP-182	Available soon (Contact Yaskawa for detail)
LED Operator Cable	1 meter: WV001 3 meter: WV003	CAT5e UTP straight-through cable with RJ-45 8 pin connector

◆ Tool Requirements

Use a flat-blade screwdriver with the dimensions below for installation or removal of the option cover and RS-232C option.



3 Product Overview

◆ About this Product

The RS-232C Interface Option allows the drive to be connected to a network or external device.

Possible connected devices include:

- LED Operator
- Personal computer using DriveWizard Plus
- USB Copy Unit

These devices can be used to edit, view, and copy parameter settings in the drive.

SI-232/JC can be more easily connected and disconnected than SI-232/J. This is useful when copying parameter settings between multiple drives.

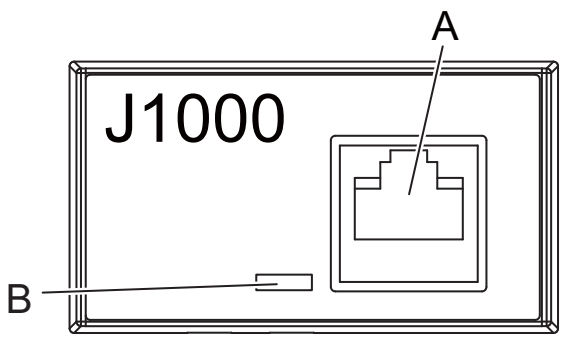
◆ Applicable Models

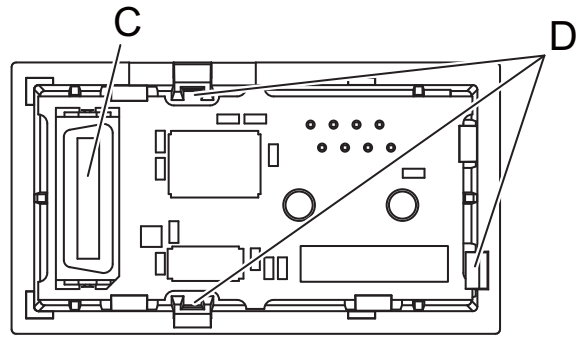
The RS-232C Option can be used with Yaskawa drive models in the table below.

Drive	Drive Software Version <1>
CIMR-J☐☐A☐☐☐☐BA☐	≥1010

<1> See “PRG” on the drive nameplate for software version number.

4 Option Components





A – RJ-45 Port

B – Option Model Number

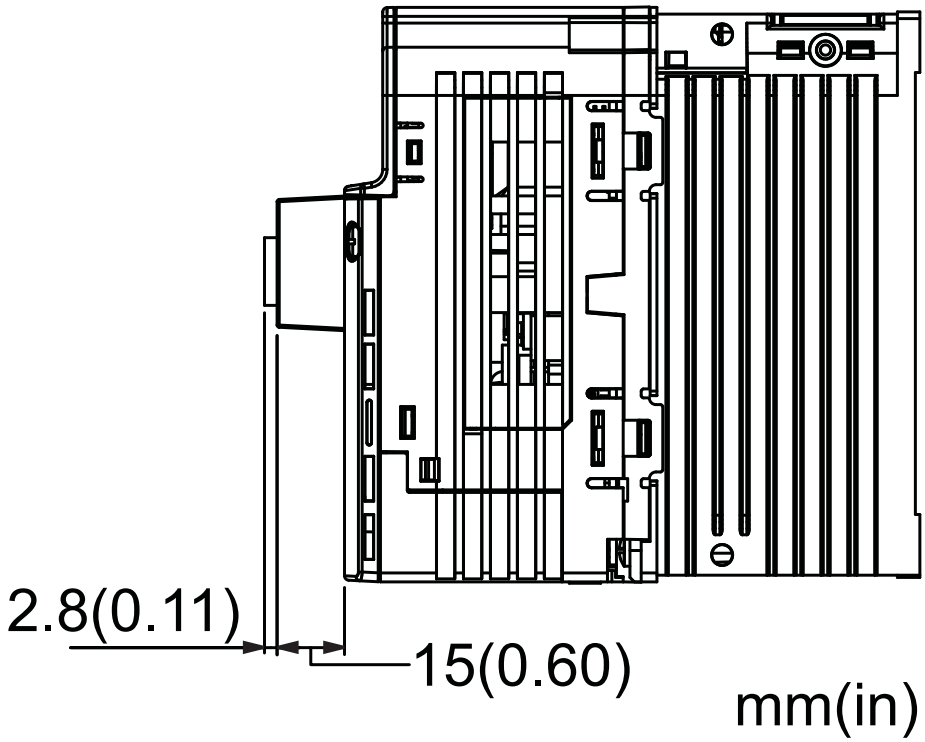
C – Option Connector to Drive

D – Connection Tabs *<1>*

<1> Connection tabs are found only on the RS-232C interface (SI-232/J).

◆ Dimensions

The installed Option interface adds 17.8 mm (0.70 in) to the total depth of the drive.



5 Installation Procedure

◆ Section Safety

⚠ DANGER

Electrical Shock Hazard

Disconnect all power to the drive, before servicing.

Failure to comply will result in death or serious injury.

Wait at least one minutes after all indicators are off. The drive has internal capacitors that remain charged even after the 24 V Power Supply option is disconnected. The drive charge LED will extinguish when the DC bus voltage is below 50Vdc. Measure drive DC bus voltage to confirm safe level.

NOTICE

Damage to Equipment

Use only Yaskawa connection cables or recommended cables.

Failure to comply may cause the drive or option to function incorrectly.

Properly connect the connectors.

Failure to comply may prevent proper operation and possibly damage equipment.

Do not exceed communication cable bend radius specifications.

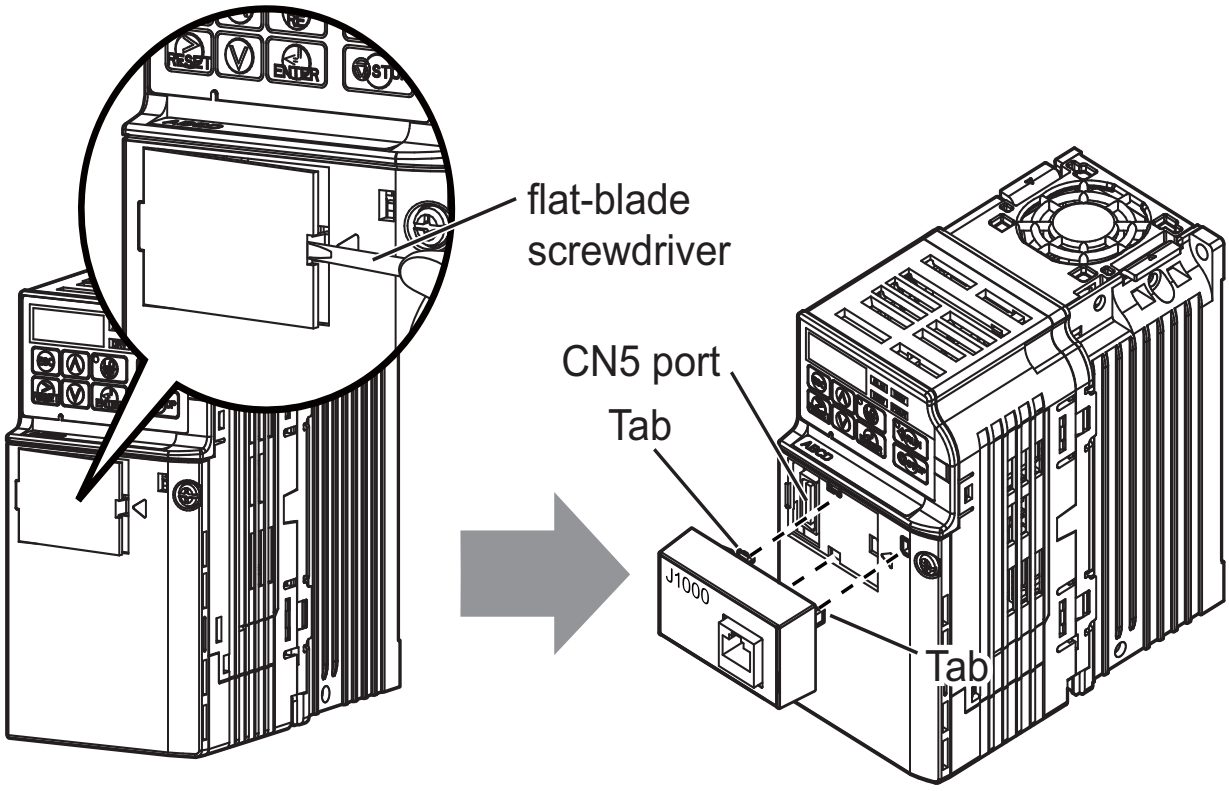
Failure to comply may result in broken wires or loose connections.

5 Installation Procedure

◆ Attaching the Option Interface

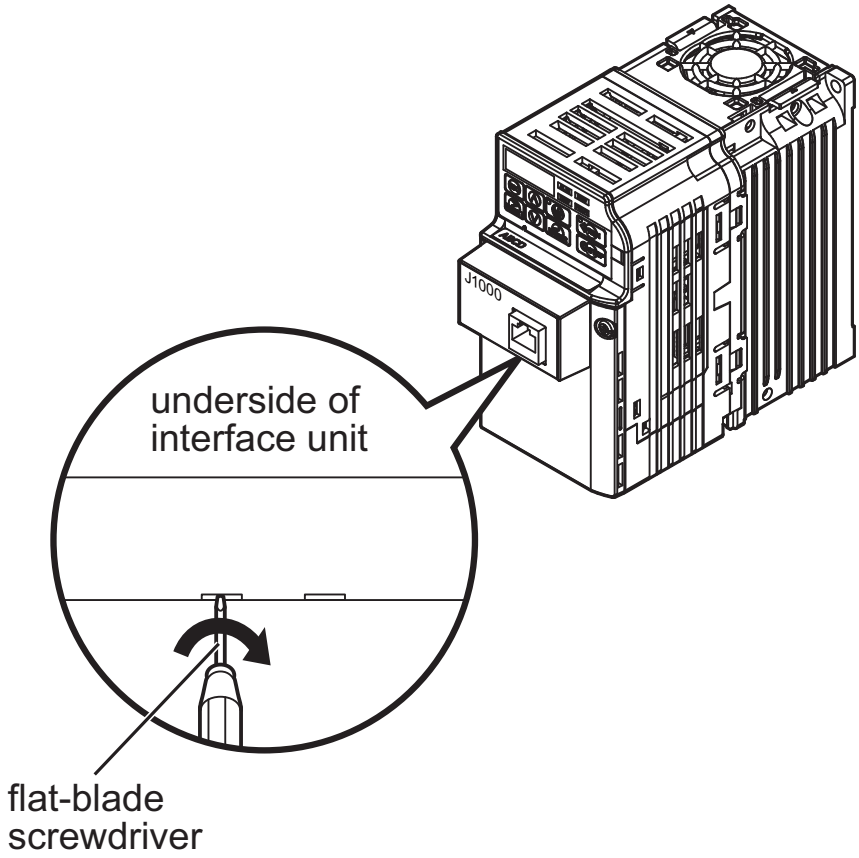
1. Insert a flat-blade screwdriver into the opening as shown in the diagram below to remove the option cover from the drive.
2. Insert the connector on the back of the interface into the CN5 port on the drive so that it clicks into place.

Note: The RS-232C Interface (SI-232/J) has three additional connection tabs that must also click into place to properly mount the option.



◆ Removing the option interface

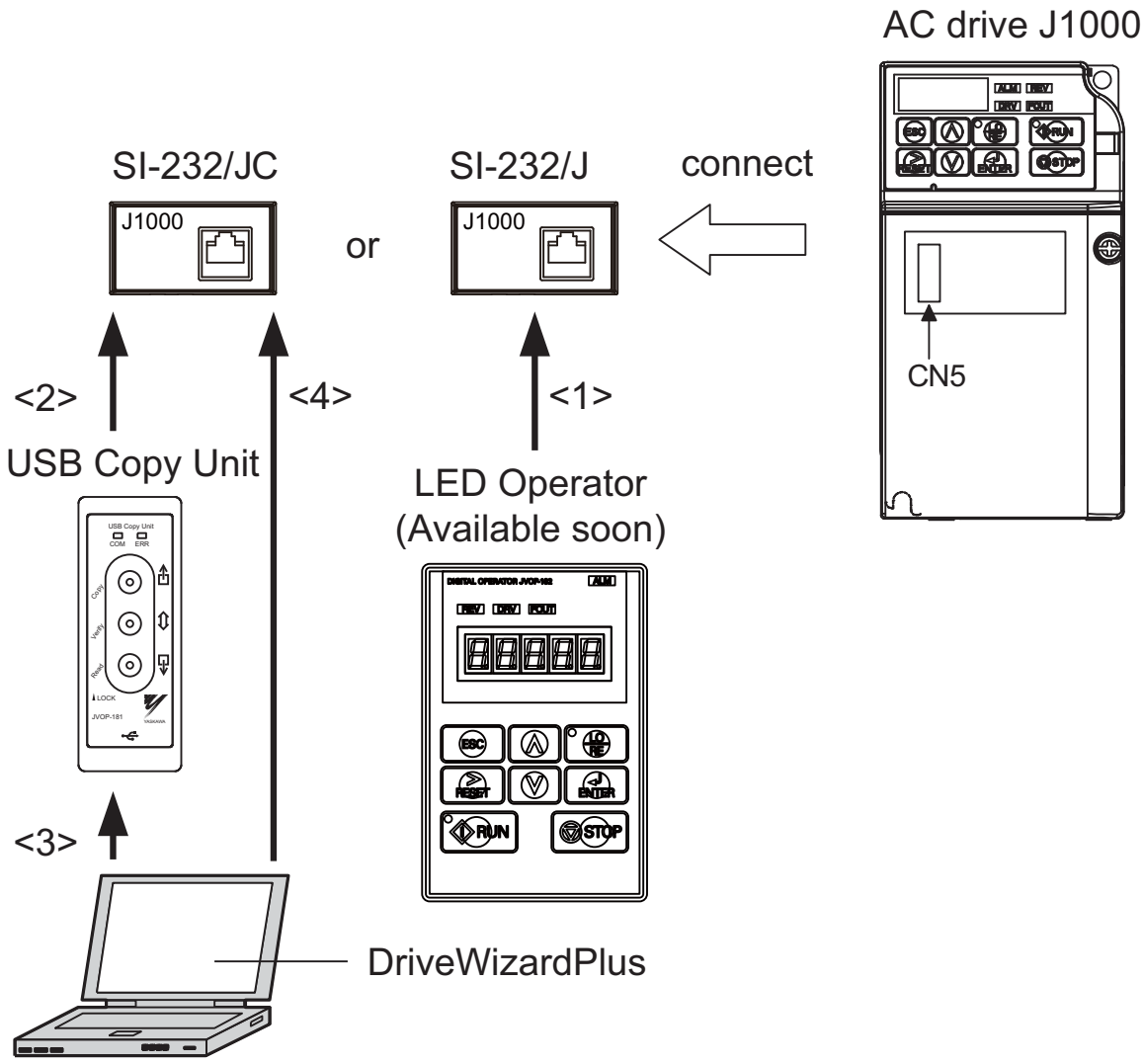
1. Use a flat-blade screwdriver as shown in the diagram to press gently against the small openings and disconnect the option unit.



5 Installation Procedure

◆ Connecting Peripheral Devices to the RS-232C Interface Option

NOTICE: *Only use specific cables recommended by Yaskawa. Yaskawa cannot guarantee proper operation if non-specified cables are used.*



<1> Use the LED operator cable, WV001 or WV003.
<2> Only use the RJ-45 cable supplied with the USB Copy Unit.
<3> Only use the USB cable supplied with the USB Copy Unit.
<4> Only use the cable, PN: WV103, when connecting the drive to a PC.

6 Related Drive Parameters

No.	Name	Description	Default
o2-06	Operation Selection when Digital Operator is Disconnected	Determines if the drive will stop when the digital operator is removed in Local mode or with b1-02 set to zero. 0: Disabled - The drive will not stop when the digital operator is removed. 1: Enabled - The drive will fault (OPR) and coast to stop when the digital operator is removed.	0

7 Troubleshooting

Problems with the option interface may trigger an operator error. Refer to the J1000 Technical Manual for all other errors.

◆ Fault

LED Operator Display		Fault Name
	oPr	Digital operator connection fault
Cause		**Possible solution**
LED operator is not properly connected to the drive or cables are damaged		• Check the connection between the LED operator and the drive • Replace the cable if damaged • Turn off the drive input power and disconnect the LED operator • Next reconnect the operator and turn the drive input power back on

8 Specifications

◆ Drive Specification

Item	Specification
Model Number	**SI-232/J:** RS-232C Interface for use with remote digital operator **SI-232/JC:** RS-232C Interface for use with copy unit and PC communication
Storage/ Installation Area	Indoors (an area free from oil mist and dust)
Ambient Temperature	-10 to +50°C
Humidity	95% RH or less with no condensation
Storage Temperature	-20 to +60°C allowed for short-term transport of the product
Altitude	1000 m or less

9 Yaskawa Locations

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(Address revision No.: 08-5-3)

10 Revision History

The revision dates and numbers of the revised manuals are given on the bottom of the back cover.

MANUAL NO. TOBP C730600 32A

Published in Japan May 2008 07-12 ◇1

- May 2008: Date of publication
- 07-12: Date of original publication
- ◇1: Revision number

Date of Publication	Rev. No.	Section	Revised Content
December 2007	–	–	First edition
May 2008	◇1	Chapter 1	Revision: Applicable Documentation
July 2008	◇2	Chapter 9	Revision: Address

YASKAWA AC Drive-J1000 Option

RS-232C Interface
Technical Manual

J1000オプションユニット

RS-232Cインタフェース オプションユニット
取扱説明書

この製品に関するお問い合わせ先については，9章 お問い合わせ先をご覧ください。

Any inquiries related to the product can be directed to the address listed at chapter 9.

YASKAWA

株式会社 安川電機

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In the event that the end user of this product is to be the military and said product is to be employed in any weapons systems or the manufacture thereof, the export will fall under the relevant regulations as stipulated in the Foreign Exchange and Foreign Trade Regulations. Therefore, be sure to follow all procedures and submit all relevant documentation according to any and all rules, regulations and laws that may apply.

Specifications are subject to change without notice for ongoing product modifications and improvements.

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TOBPC73060032

MANUAL NO. TOBP C730600 32A

Published in Japan July 2008 07-12 ②-0